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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,932	10/30/2003	James F. McGuckin JR.	1255	1044
7590	08/30/2011		EXAMINER	
NEIL D. GERSHON REX MEDICAL 1011 HIGH RIDGE RD Stamford, CT 06905			WEBB, SARAH K	
			ART UNIT	PAPER NUMBER
			3731	
			MAIL DATE	DELIVERY MODE
			08/30/2011	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/696,932	MCGUCKIN ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	SARAH WEBB	3731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 22 June 2011.
- 2a) This action is **FINAL**.                            2b) This action is non-final.
- 3) An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 4) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 5) Claim(s) 5-9,11,13,15 and 23-27 is/are pending in the application.
  - 5a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 6) Claim(s) \_\_\_\_\_ is/are allowed.
- 7) Claim(s) 5-9,11,13,15 and 23-27 is/are rejected.
- 8) Claim(s) \_\_\_\_\_ is/are objected to.
- 9) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 10) The specification is objected to by the Examiner.
- 11) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date. _____ .	6) <input type="checkbox"/> Other: _____ .

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 6/22/2011 have been fully considered but they are not persuasive. Van der Burg is considered to meet the new claim requirements, as explained more thoroughly below. A tangent line is not required to extend perpendicular to the longitudinal axis, as indicated by the phantom lines drawn below. Therefore, the broad requirement is met by the Van der Burg filter.

### ***Claim Objections***

2. Claim 23 is objected to because of the following informalities: it appears that “inwardly bend<sub>u</sub> region” should be changed to “inwardly bent<sub>u</sub>region.” Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 5-9, 11, 13, 15, and 23-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 23 recites that the first bend region is positioned distal of the first tubular portion and the second bend region is positioned proximal of the second tubular portion in lines 10-12, but the claim does not previously set forth proximal and distal ends of the stent. Therefore, the relative positions of the components are unclear.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

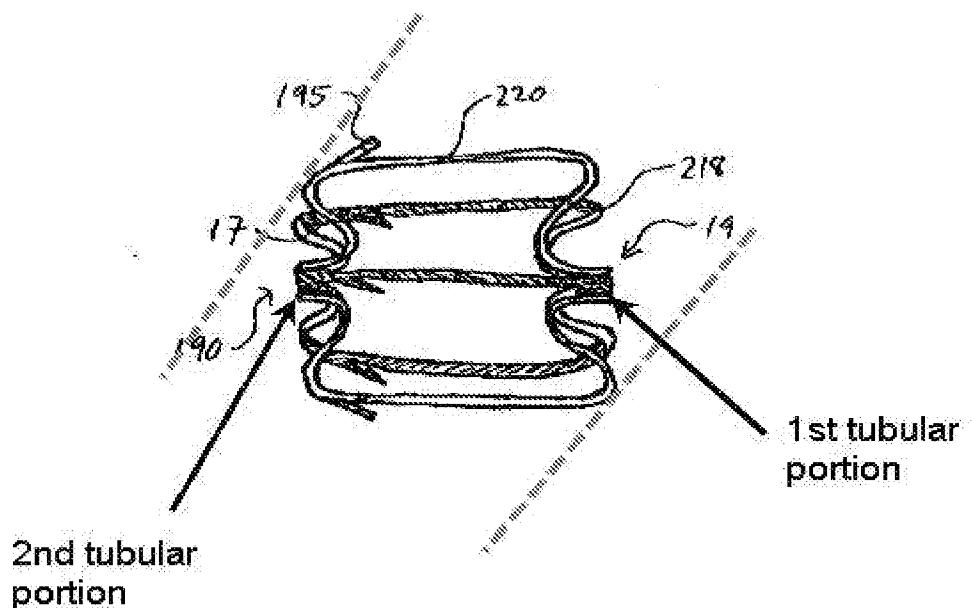
A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 6, 7, 9, 13, 23, 24, and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by USPN 6,994,092 (Van der Burg et al.).

Van der Burg discloses a vessel filter in Figure 35 comprising a plurality of elongated struts separated by cutouts. The struts extend parallel to the longitudinal axis and form a “mounting section.” The filter is moveable between compressed and expanded configurations and Van der Burg explains that the device can be made of self-expanding material, such as Nitinol (column 6, lines 48-55). Each strut has bent regions at proximal and distal ends. The struts converge at both proximal and distal ends to form “filter sections” that terminate in tubular portions. As more clearly indicated in the drawing below, lines drawn *tangent* to the bent filter sections do not intersect the corresponding tubular portions at each end. A tangent line is not required to extend perpendicular to the longitudinal axis. For example, at least a portion of the phantom line drawn *tangent* to the first bend region is distal to the first tubular portion. Therefore, the first bend region is considered to be positioned sufficiently distal of the first tubular portion and the second bend portion is considered to be positioned

sufficiently proximal to the second tubular portion to meet the claimed structural requirements.



Regarding claims 6 and 13, the struts have a plurality of vessel engaging members (195) with pointed ends.

Regarding claim 9, the struts are spaced circumferentially about 60 degrees apart.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Van der Burg et al. in view of USPN 6,443,972 (Bosma et al.).

Van der Burg fails to meet the requirement that the longitudinal struts have a roughened surface. Bosma '972 teaches that struts of a filter can have a roughened surface (30) (see Figures 9A-C) to increase retention of the filter within the body lumen (column 6, lines 13-21). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Van der Burg filter so that the struts include a roughened surface, as taught by Bosma '972, as this combination of known elements obtains the predictable result of enhancing retention of the device within the body lumen.

6. Claims 8 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van der Burg et al. in view of US Patent App. Pub. No. 2002/0058911 (Gilson et al.).

Van der Burg fails to meet the requirement that the ends of at least one strut are twisted out of phase, but Gilson teaches that it is known to form longitudinal struts of an embolic filter in this manner (see Figures 15-22). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the struts of the Van der Burg filter to have at least one strut out of phase with the others, as taught

by Gilson, as this modification merely involves a substitution of known strut shapes to obtain the predictable results of forming a filter device.

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Van der Burg et al. in view of USPN 7,097,651 (Harrison et al.).

Van der Burg fails to form an angled portion of the struts in the bent region to have a width less than the portion of the struts parallel to the longitudinal axis of the device. Harrison discloses another filter with elongated struts that terminate in tubular portions. As shown in Figure 1C, the struts include bent regions at either end (28, 30). Harrison teaches that it is known to form portions of the struts near the bent regions to have a smaller width, as indicated by references (70) and (80) in Figures 2 and 3, respectively, in order to reduce stress concentration and improve fatigue resistance (column 6, line 54 – column 7, line 5). It would have been obvious to modify the angled portions of the struts of the Van der Burg device so that they have a width less than the width of the straight portions of the struts in the mounting section, as Harrison teaches that this improves the performance of the device and increases the number of times it may be expanded.

8. Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,994,092 (van der Burg et al.) in view of USPN 6,241,746 (Bosma '746).

Van der Burg fails to include ribs extending from adjacent struts that terminate at a joint that is free from connection to the struts. Bosma '746 discloses another filter cage structure in Figures 1-43 that includes a plurality of longitudinal struts (12) forming a middle mounting section and two filtering end sections. Bosma '746 teaches that the

filter structure should include circumferential resilient supports to aid in holding the filter in place within the vessel (column 2, lines 64-68). As clearly shown in Figures 1-4, the circumferential ribs have two sections joined at a region that is unattached to the struts (12). It understood that the circumferential ribs would be curved, as viewed along the longitudinal axis (Figure 4A). It would have been obvious to one of ordinary skill in the art at the time the invention was made include ribs in the Van der Burg filter, as taught by Bosma '746, in order to provide radial support to the longitudinal struts and maintain its position in the vessel.

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah Webb whose telephone number is (571)272-5749. The examiner can normally be reached on Monday through Friday from 9:00 AM-5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, ***please contact the examiner's supervisor, Tom Hughes, at (571) 272-4357.*** The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

***If there are any inquiries that are not being addressed by first contacting the Examiner or the Supervisor, you may send an email inquiry to***

TC3700\_Workgroup\_D\_Inquiries@uspto.gov.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. W./  
Examiner, Art Unit 3731

/Ryan J Severson/  
Primary Examiner, Art Unit 3731  
8/23/11